Proposed CALSIM II Baseline Inputs for Common Assumptions

The following assumptions are for purposes of creating baselines for CALFED water supply investigations.

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
Period of Simulation	73 years (1922-1994)	Same	Same
HYDROLOGY			
Level of Development (Land Use)	2001 Level, DWR Bulletin 160-98[4]	2030 Level	2030 Level
Demands			
North of Delta (exc American R)			
CVP (non-settlement)	Land Use based, limited by Full Contract	Same	Same
(Settlement)	Land Use based, historical	Land Use based, historical	Land Use based, historical
SWP (FRSA)	Land Use based, limited by Full Contract	Same	Same
Non-Project	Land Use based	Same (may adjust as a result of conservation)	Same (may adjust as a result of extensive conservation)
CVP Refuges	Firm Level 2[5]	Same (for interim formulation runs – may change by final runs)	Same (for interim formulation runs – may change by final runs)
American River Basin			
Water rights	2001[6]	Alt 2 formulation of AR Contract Renewal EIS (may adjust as a result of conservation)	Alt 2 formulation of AR Contract Renewal EIS (may adjust as a result of extensive conservation)
CVP	2001[7]	Alt 2 formulation of AR Contract Renewal EIS (may adjust as a result of conservation)	Alt 2 formulation of AR Contract Renewal EIS (may adjust as a result of extensive conservation)
San Joaquin River Basin			
Friant Unit	Regression of historical	Same	Same
Lower Basin	Fixed annual demands	Same	Same
Stanslaus River Basin	New Melones Interim Operations Plan	Same[8]	Same

1 This represents the CEQA condition of "existing conditions" as assumed by the Common Assumptions Work Group.

2 This represents the NEPA condition of "future with no-action" as assumed by the Common Assumptions Work Group.

3 This represents a future no-action condition that includes much greater levels of agricultural and urban conservation, water recycling, land retirement (in Westlands WD), and desalination. It is possible that actual input demands will be reduced as a result of less demand or more local supply as a result of these local actions.

4 2001 Level of Development defined by linearly interpolated values from the 1995 Level of Development and 2020 Level of Development from DWR Bulletin 160-98

5 It is assumed that Level 4 supplies are obtained through water transfers and are not part of the basic operating demands in CALSIM.

6 1998 Level Demands defined in Sacramento Water Forum's EIR with a few updated entries; assumptions for each purveyor are presented in Appendix B

7 Same as footnote 6

8 Because a new operating plan has not been determined, the interim plan is the default plan for future no-action conditions.

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
South of Delta			
CVP	Full Contract	Same (may adjust as a result of conservation)	Same (may adjust as a result of conservation)
CCWD	140 TAF/YR[9]	195 TAF/YR	195 TAF/YR
SWP (w/ North Bay Aqueduct)	3.0-4.1 MAF/YR	3.3-4.1 MAF/YR (may adjust for conservation, recycle, desalinization)	3.3-4.1 MAF/YR (may adjust for conservation, recycle, desalinization)
SWP Interruptible Demand	MWDSC up to 50 TAF/month, Dec-Mar, others up to 84 TAF/month[10]	Same (need to check with MWD)	Same (need to check with MWD)
FACILITIES			
System-wide	Existing Facilities (2001)		
Upper American River	PCWA pumps[11]	Same	Same
Delta Export Conveyance			
SWP Banks Pumping Plant	6,680 cfs, can increase up to 8,500 cfs Dec15-Mar15 (min. of 300 cfs)	Subject to continuing discussions	
CVP Tracy Pumping Plant	4,600 cfs (minimum of 800 cfs)	Subject to continuing discussions	
REGULATORY STANDARDS			
Trinity River			
Minimum Flow below Lewiston Dam	Interim (369-453 TAF/YR)	Trinity EIS Preferred Alternative (369-815 TAF/YR)	Trinity EIS Preferred Alternative (369-815 TAF/YR)
		Subject to continuing discussions	
Trinity Reservoir End-of-September Minimum Storage	Trinity EIS Preferred Alternative (600 TAF as able)	Same	Same
		Subject to continuing discussions	
Clear Creek			
Minimum Flow below Whiskeytown Dam	Downstream water rights, 1963 USBR Proposal to USFWS and NPS, and USFWS discretionary use of CVPIA 3406(b)(2)	Same	Same
		Subject to continuing discussions	
Upper Sacramento River			
Shasta Lake End-of-September Minimum Storage	SWRCB WR 1993 Winter-run Biological Opinion (1900 TAF)	Same	Same
		Subject to continuing discussions	
Minimum Flow below Keswick Dam	Flows for SWRCB WR 90-5 and 1993 Winter-run Biological Opinion temperature control, and USFWS discretionary use of CVPIA 3406(b)(2)	Same	Same
		Subject to continuing discussions	
Feather River			
Minimum Flow below Thermalito Diversion Dam	1983 DWR, DFG Agreement (600 CFS)	Same	Same

[9] Delta diversions include operations of Los Vaqueros Reservoir operations

[10] May require updating to consider MWDSC Eastside Reservoir and other facility operational objectives

[11] The Placer County Water Agency facility is just about to begin construction – pumps in American River upstream of Folsom

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
Minimum Flow below Thermalito Afterbay outlet	1983 DWR, DFG Agreement (1000 – 1700 CFS)	Same	Same
Yuba River			
Minimum Flow below Daguerre Point Dam	SWRCB D-1644 (under appeal?)	Same	Same
American River			
Minimum Flow below Nimbus Dam	SWRCB D-893 (see accompanying Operations Criteria), and USFWS discretionary use of CVPIA 3406(b)(2)	Same Subject to continuing discussions	Same
Minimum Flow at H Street Bridge	SWRCB D-893		
Lower Sacramento River			
Minimum Flow near Rio Vista	SWRCB D-1641	Same	Same
Mokelumne River			
Minimum Flow below Camanche Dam	FERC 2916-029, 1996 (Joint Settlement Agreement) (100 – 325 CFS)	Same	Same
Minimum Flow below Woodbridge Diversion Dam	FERC 2916-029, 1996 (Joint Settlement Agreement) (25 – 300 CFS)	Same	Same
Stanislaus River			
Minimum Flow below Goodwin Dam	1987 USBR, DFG agreement, and USFWS discretionary use of CVPIA 3406(b)(2)	Same	Same
Minimum Dissolved Oxygen	SWRCB D-1422	Same	Same
Merced River			
Minimum Flow below Crocker-Huffman Diversion Dam	Davis-Grunsky (180 – 220 CFS, Nov – Mar), and Cowell Agreement	Same	Same
Minimum Flow at Shaffer Bridge	FERC 2179 (25 – 100 CFS)	Same	Same
Tuolumne River			
Minimum Flow at Lagrange Bridge	FERC 2299-024, 1995 (Settlement Agreement) (94 – 301 TAF/YR)	Same	Same
San Joaquin River			
Maximum Salinity near Vernalis	SWRCB D-1641	Same	Same
Minimum Flow near Vernalis	SWRCB D-1641, and Vernalis Adaptive Management Plan per San Joaquin River Agreement	Same[12]	Same
Sacrameto River-San Joaquin River Delta			
Delta Outflow Index (Flow and Salinity)	SWRCB D-1641	Same	Same

[12] It is assumed that VAMP or a functional equivalent would still be in place in 2030 since such actions are undertaken to meet a regulatory standard specified in D-1641

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
Delta Cross Channel Gate Operation	SWRCB D-1641	Same	Same
Delta Exports	SWRCB D-1641	Same	Same
OPERATIONS CRITERIA			
Subsystem			
Upper Sacramento River			
Flow Objective for Navigation (Wilkins Slough)	Discretionary 3,500 – 5,000 CFS based on Lake Shasta storage condition	Same	Same
American River			
Folsom Dam Flood Control	SAFCA, Operation of Folsom Dam, Variable 400/670 (without outlet modifications)	Same, but *with* outlet modifications	Same, but *with* outlet modifications
Flow below Nimbus Dam	Discretionary operations criteria corresponding to SWRCB D-893 required minimum flow	Same	Same
Stanislaus River			
Flow below Goodwin Dam	1997 New Melones Interim Operations Plan	Same	Same
System-wide			
CVP Water Allocation			
CVP Settlement and Exchange	100% (75% in Shasta Critical years)	Same	Same
CVP Refuges	100% (75% in Shasta Critical years)	Same	Same
CVP Agriculture	100% - 0% based on supply	Same	Same
CVP Municipal & Industrial	100% - 50% based on supply	Same	Same
SWP Water Allocation			
North of Delta (FRSA)	Contract specific	Same	Same
South of Delta (including North Bay Aqueduct)	Based on supply; Equal prioritization between Ag and M&I	Same	Same
CVP/SWP Coordinated Operations			
Sharing of Responsibility for In-Basin-Use	Coordinated Operations Agreement	Same	Same
Sharing of Surplus Flows	Coordinated Operations Agreement	Same	Same
Sharing of Restricted Export Capacity for Project Specific Priority Pumping	Equal sharing of export capacity under SWRCB D-1641; use of CVPIA 3406(b)(2) only restricts CVP exports; EWA use restricts CVP and/or SWP as directed by CALFED Fisheries Agencies	Same	Same

Subject to continuing discussions

Subject to continuing discussions

Subject to continuing discussions

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
Sharing of Export Capacity for Lesser Priority and Wheeling Related Pumping	Cross Valley Canal wheeling (max of 128 TAF/Yr), CALFED ROD defined Joint-Point-of-Diversion	Same	Same
	Subject to continuing discussions		
CVPIA 3406(b)(2)			
Allocation	2003 Policy, variable 700 - 800 TAF/YR depending on water supply forecasts (limited to 600 TAF/YR in Shasta Critical years)	Same	Same
Actions	1995 WQCP (non-discretionary), Fish flow objectives (Oct-Jan), CVP export reduction (Dec), VAMP (Apr 15- May 16) CVP export restriction, 3000 CFS CVP export limit in May and June (D1485 Striped Bass cont.), Post (May 16-31) VAMP CVP export restriction, Ramping of CVP export (Jun), Pre (Apr 1-15) VAMP CVP export restriction, CVP export reduction (Feb-Mar), Upstream Releases (Feb-Sep)	Same	Same
		Subject to continuing discussions	
Accounting Adjustments	No limit on responsibility for non-discretionary D1641 requirements, no Reset with the Storage metric and no Offset with the Release and Export metrics	Same	Same
CALFED Environmental Water Account			
Actions	Total exports restricted to 4000 CFS, 1 wk/mon, Dec-Mar (wet year: 2 wk/mon), VAMP (Apr 15- May 16) export restriction, Pre (Apr 1-15) and Post (May 16-31) VAMP export restriction, Ramping of export (Jun)	Same	Same
	Subject to continuing discussions		
Assets	50% of use of JPOD, 50% of any CVPIA 3406(b)(2) releases pumped by SWP, flexing of Delta Export/Inflow Ratio (not explicitly modeled), dedicated 500 CFS increase of Jul – Sep Banks PP capacity, north-of-Delta (0 - 135 TAF/Yr) and south-of-Delta purchases (50 - 185 TAF/Yr), and 200[13] TAF/YR south-of-	Same	Same

	Existing Condition[1]	Future No-Action Condition[2]	Alternative Future Condition[3]
	Delta groundwater storage capacity		
	Subject to continuing discussions		
Restrictions	No carryover of debt past Sep in model now (may need to be modified), asset carryover ok	Same	Same
	Subject to continuing discussions		